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Contact for lead author: Area Rangeland Management Specialist, Glasgow Area Office, MT **Reference site used? No**
Date: 05/04/05 **MLRA: 52XC** **Ecological Site: Dense Clay 10-14" p.z.** This *must* be verified based on soils and climate (see Ecological Site Description). Current plant community *cannot* be used to identify the ecological site.

Indicators. For each indicator, describe the potential for the site. Where possible, (1) use numbers, (2) include expected range of values for above- and below-average years for **each** community within the reference state (when appropriate), and (3) cite data. Continue descriptions on separate sheet if needed. **Weight factors** are either 0.5, 1.0 or 2.0. The default factor is 1.0. A maximum of 8 indicators may be changed to 0.5 or 2.0. The rest remain at 1.0.	**Wgt. Factor**
1. Number and extent of rills: Rills should not be present in HCPC or in plant community A. On slopes at or > 8%, in plant community B, rills would be visible, ½ inch deep or more, linear, rarely exceeding 1 foot in length. Distance between rills is irregular.	1.0
2. Presence of water flow patterns: Water flow patterns should not be present in HCPC or in plant community A. On slopes at or > 8%, in plant community B, water flow patterns would be visible as long (more than 1feet) and continuous across the landscape.	1.0
3. Number and height of erosional pedestals or terracettes: Pedestals or terracettes are nonexistent in HCPC. If in plant community A, careful examination on slopes > 8% yield occasional pedestals and terracettes approximately ¼ inch above the soil surface. If in plant community B, pedestals and terracettes are frequent and ½ - ¾ inch above the soil surface.	1.0
4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are *not* bare ground): 40-50% of the soil surface could be bare in HCPC and in plant community A. If in plant community B, 45-60% of the soil surface can be exposed.	1.0
5. Number of gullies and erosion associated with gullies: None.	1.0
6. Extent of wind scoured, blowouts and/or depositional areas: None.	1.0
7. Amount of litter movement (describe size and distance expected to travel): Litter movement is not expected with HCPC and plant community A. On slopes > 8% in plant community B, fine and coarse litter movement is visible into depressions or natural obstacles.	1.0
8. Soil surface (top few mm) resistance to erosion (stability values are averages – most sites will show a range of values for both plant canopy and interspaces, if different): Stability class 4 or 5 under plant canopy. In all State 1 reference plant communities, soil stability class is 2 or 3 in the large interspaces.	1.0
9. Soil surface structure and SOM content (include type and strength of structure, and A-horizon color and thickness for both plant canopy and interspaces, if different): The surface layer is usually 0.5" to 3.0" thick and typically has clay, silty clay or silty clay loam texture. Surface color ranges from light brownish gray to grayish brown. Soil organic matter ranges from 0.5% to 3.0%.	1.0
10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff: In HCPC and Plant community A, 40-50% plant canopy and 30-65% basal cover with small gaps between plants should reduce raindrop impact and slow overland flow, providing increased time for infiltration to occur. Healthy, deep rooted native grasses enhance infiltration and reduce runoff. Infiltration rate is very slow. If in plant community B, 30-40% plant canopy and 30-40% basal cover with large gaps between plants, amplifies raindrop impact and increases overland flow. The site tends to be more xeric as runoff increases. Because of the high sodium content, exposed soil can develop a hard crust as the sodium disperses the soil particles.	1.0
11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site): No compaction layer should be evident in any of the State 1 plant communities. Restrictive, very hard claypan begins at 3-4 inches.	1.0
12. Functional/Structural Groups (list in order of descending dominance by above-ground weight using symbols: >>, >, = to indicate much greater than, greater than, and equal to): HCPC: Tall cool season bunchgrasses = mid-stature, cool season rhizomatous grasses > short stature, warm season rhizomatous grasses > shrubs > forbs. **Plant community A**: Tall cool season bunchgrasses = mid-stature, cool season rhizomatous grasses > short stature, warm season rhizomatous grasses > shrubs = forbs. **Plant community B**: Short warm season rhizomatous grasses = short cool season bunchgrasses > mid-stature, cool season rhizomatous grasses > shrubs = forbs.	1.0
13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence): Plant mortality and decadence very low.	1.0
14. Average percent litter cover (20-50%) and depth (0-0.25 inches).). Litter cover is in contact with soil surface. Litter decreases in Plant community A to 30-40% and depth is immeasurable.	1.0
15. Expected annual production (this is TOTAL above-ground production, not just forage production): 600 - 1000 #/acre.	1.0
16. Potential invasive (including noxious) species (native and non-native). List species which characterize degraded states and which, after a threshold is crossed, "will continue to increase regardless of the management of the site" and may eventually dominate the site: Blue grama, inland saltgrass, bottlebrush squirreltail, plains prickly pear, broom snakeweed, greasewood	1.0
17. Perennial plant reproductive capability: All species have a somewhat restricted ability to reproduce in HCPC and Plant community A. In Plant community B, plant seedlings will be weighed in favor of marginal and undesirable species.	1.0